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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,144

11/18/2003

John P. Cumings

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01/07/2009

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EXAMINER

PHASGE, ARUN S

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

01/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/717,144	Applicant(s) CUMINGS ET AL.	
	Examiner Arun S. Phasge	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 5-30 is/are pending in the application.
- 4a) Of the above claim(s) 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-14, 24-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1-2, 5-6, 11-14, 26 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colbert of record for reasons of record in view of Yakobson, U.S. Patent 6,280,677.

The Colbert patent discloses the use of carbon nanotubes, not the presently claimed materials. The Yakobson patent also shows the functionally equivalent materials, such as those claimed to the carbon shown in Colbert (see col. 3, lines 9-21, where composites of carbon and boron nitride are disclosed).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of Colbert to use other functionally equivalent materials, because the Yakobson patent teaches the functionally equivalence between the materials.

Claims 1-2, 5-13, 26 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita of record for reasons of record in view of Yakobson applied as above.

The Morita patent discloses the use of carbon nanotubes, not the presently claimed materials. The Yakobson patent also shows the functionally equivalent materials, such as those claimed to the carbon shown in Colbert (see claim 3).

Consequently, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of Morita to use other functionally equivalent materials, because the Yakobson patent teaches the functional equivalence between the materials.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita in view of Yakobson as applied to claims above, and further in view of Colbert of record for reasons of record.

Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colbert in view of Yakobson as applied to claims above, and further in view of Miyamoto, U.S. Patent 6,157,043.

The Colbert patent discloses the use of carbon nanotubes, not the presently claimed materials. The Miyamoto patent also shows the functionally equivalent materials, such as those claimed to the carbon shown in Colbert (see col. 4, lines 20-37).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of Colbert to use other functionally equivalent materials, because the Miyamoto patent teaches the functional equivalence between the materials.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colbert in view of Yakobson as applied to claims above, and further in view of Tenne et al. (Tenne), U.S. Patent 5,958,358.

The Colbert patent discloses the use of carbon nanotubes, not the presently claimed materials. The Tenne patent also shows the functionally equivalent materials, such as those claimed to the carbon shown in Colbert (see Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of Colbert to use other functionally equivalent materials, because the Tenne patent teaches the functional equivalence between the materials.

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun S. Phasge whose telephone number is (571) 272-1345. The examiner can normally be reached on MONDAY-THURSDAY, 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1795

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Arun S. Phasge/
Primary Examiner, Art Unit 1795

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